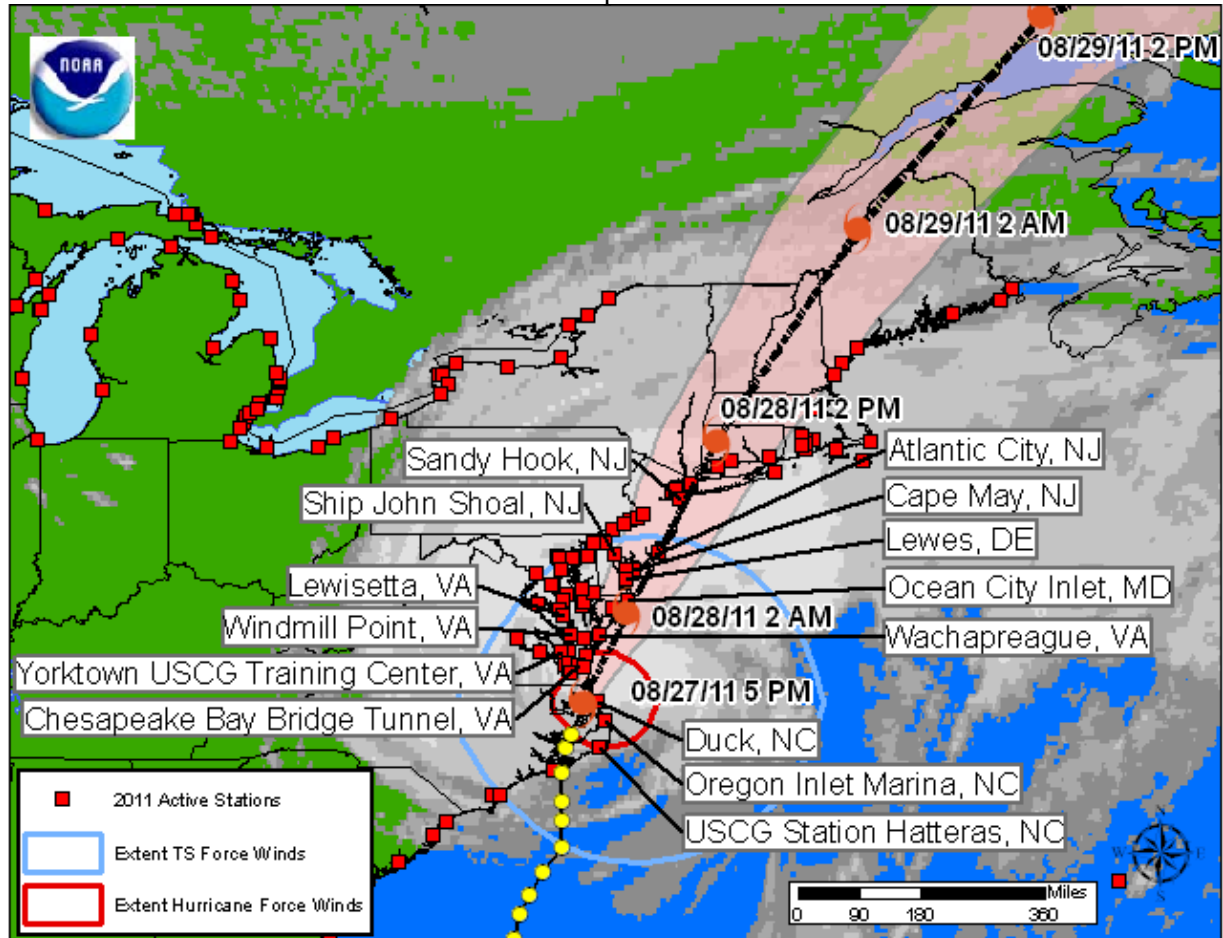


Hurricane IRENE QuickLook  
Posted: 18:00 EDT 08/27/2011

#### NOAA and NOAA Partnership Stations Relative to the Storm



#### Storm Analysis

As of 08/27/2011 18:00 EDT, water levels along the North Carolina northern coast, Virginia, and the southern Chesapeake Bay are being significantly affected by Hurricane Irene. Levels between USCg Station Hatteras, NC and Lewes, DE are elevated between 1.1 and 2.6 feet above predictions. Water levels in the Chesapeake Bay are elevated 3 to 4 feet above predictions as far north as Wachapreague, VA. Water levels from Beaufort, NC to Florida are falling or have returned to near predicted values. Stations in New Jersey are beginning to rise above predictions.

Winds continue to rise ahead of the storm and range between 30 and 50 kts with gusts as high as 68 kts measured at Oregon Inlet Marina, NC. Winds are starting to decrease from USCg Station Hatteras, NC and south. Winds around the entrance to the Chesapeake Bay are also rising and range between 40 and 50 kts with gusts up to 60 kts at Chesapeake Bay Bridge Tunnel, VA.

Barometric pressure continues to fall significantly from Duck, NC northward. Barometric Pressure has

## Hurricane IRENE QuickLook, POSTED 18:00 EDT 08/27/2011

bottomed out and is rising from Beaufort, NC southward.

Please note that the water level data at Wachapreague, VA have been intermittent but were reporting normally as of 17:30 EDT.

Water Level and Meteorological plots available below are updated automatically. Water level predictions relative to Mean Lower Low Water are:

USCG Station Hatteras, NC: Next predicted high tides are 0.6 ft (0.19 m) at 08/27/2011 20:15 EDT and 0.7 ft (0.22 m) at 08/28/2011 08:34 EDT.

Oregon Inlet Marina, NC: Next predicted high tides are 1.5 ft (0.44 m) at 08/27/2011 19:19 EDT and 1.3 ft (0.41 m) at 08/28/2011 07:41 EDT.

Duck, NC: Next predicted high tides are 4.2 ft (1.27 m) at 08/27/2011 18:44 EDT and 3.8 ft (1.18 m) at 08/28/2011 07:12 EDT.

Chesapeake Bay Bridge Tunnel, VA: Next predicted high tides are 3.2 ft (0.99 m) at 08/27/2011 19:37 EDT and 3.1 ft (0.95 m) at 08/28/2011 08:03 EDT.

Yorktown USCG Training Center, VA: Next predicted high tides are 2.9 ft (0.89 m) at 08/27/2011 20:34 EDT and 2.8 ft (0.85 m) at 08/28/2011 09:03 EDT.

Windmill Point, VA: Next predicted high tides are 1.7 ft (0.53 m) at 08/27/2011 22:22 EDT and 1.7 ft (0.51 m) at 08/28/2011 10:44 EDT.

Lewisetta, VA: Next predicted high tides are 1.8 ft (0.54 m) at 08/28/2011 01:04 EDT and 1.7 ft (0.53 m) at 08/28/2011 13:20 EDT.

Wachapreague, VA: Next predicted high tides are 5.1 ft (1.54 m) at 08/27/2011 20:10 EDT and 4.6 ft (1.43 m) at 08/28/2011 08:29 EDT.

Ocean City Inlet, MD: Next predicted high tides are 2.7 ft (0.82 m) at 08/27/2011 19:31 EDT and 2.4 ft (0.74 m) at 08/28/2011 07:42 EDT.

Lewes, DE: Next predicted high tides are 5.2 ft (1.59 m) at 08/27/2011 20:04 EDT and 4.5 ft (1.40 m) at 08/28/2011 08:29 EDT.

Cape May, NJ: Next predicted high tides are 6.1 ft (1.85 m) at 08/27/2011 19:55 EDT and 5.4 ft (1.65 m) at 08/28/2011 08:22 EDT.

Atlantic City, NJ: Next predicted high tides are 5.2 ft (1.60 m) at 08/27/2011 18:47 EDT and 4.6 ft (1.40 m) at 08/28/2011 07:17 EDT.

Ship John Shoal, NJ: Next predicted high tides are 7.0 ft (2.13 m) at 08/27/2011 21:19 EDT and 6.4 ft (1.98 m) at 08/28/2011 09:49 EDT.

For additional data, please see the [Center for Operational Oceanographic Products & Services](#) website. For information on Highest Astronomical Tide (HAT), NAVD88 and other datums, please see [Tidal Datums](#). For more information or archived products and reports, please see the [Storm QuickLook](#) homepage.

Analyst:WFR

-----  
SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

HURRICANE IRENE ADVISORY NUMBER 30  
500 PM EDT SAT AUG 27 2011

...IRENE ABOUT TO RE-EMERGE OVER THE ATLANTIC WATERS...

WATCHES AND WARNINGS

-----  
CHANGES IN WATCHES AND WARNINGS WITH THIS ADVISORY...

THE HURRICANE WARNING HAS BEEN DISCONTINUED SOUTH OF CAPE FEAR NORTH CAROLINA.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...

- \* CAPE FEAR NORTH CAROLINA NORTHWARD TO SAGAMORE BEACH MASSACHUSETTS...INCLUDING THE PAMLICO...ALBEMARLE...AND CURRITUCK SOUNDS...DELAWARE BAY...CHESAPEAKE BAY SOUTH OF DRUM POINT...NEW YORK CITY...LONG ISLAND...LONG ISLAND SOUND...COASTAL CONNECTICUT AND RHODE ISLAND...BLOCK ISLAND...MARTHAS VINEYARD AND NANTUCKET

A TROPICAL STORM WARNING IS IN EFFECT FOR...

- \* CHESAPEAKE BAY FROM DRUM POINT NORTHWARD AND THE TIDAL POTOMAC
- \* NORTH OF SAGAMORE BEACH TO EASTPORT MAINE
- \* UNITED STATES/CANADA BORDER NORTHEASTWARD TO FORT LAWRENCE INCLUDING GRAND MANAN
- \* SOUTH COAST OF NOVA SCOTIA FROM FORT LAWRENCE TO PORTERS LAKE

INTERESTS ELSEWHERE IN EASTERN CANADA SHOULD MONITOR THE PROGRESS OF IRENE.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE. FOR STORM INFORMATION SPECIFIC TO YOUR AREA OUTSIDE THE UNITED STATES...PLEASE MONITOR PRODUCTS ISSUED BY YOUR NATIONAL METEOROLOGICAL SERVICE.

DISCUSSION AND 48-HOUR OUTLOOK

-----  
AT 500 PM EDT THE CENTER OF HURRICANE IRENE WAS LOCATED ABOUT 50 MI SSE OF NORFOLK VIRGINIA, ABOUT 340 MI SSW OF NEW YORK CITY. IRENE IS MOVING TOWARD THE NORTH-NORTHEAST NEAR 13 MPH AND THIS MOTION ACCOMPANIED BY A FASTER FORWARD SPEED IS EXPECTED DURING THE NEXT DAY OR SO. ON THE FORECAST TRACK...THE CENTER OF IRENE WILL MOVE NEAR OR OVER THE MID-ATLANTIC COAST TONIGHT...AND MOVE OVER SOUTHERN NEW ENGLAND ON SUNDAY.

MAXIMUM SUSTAINED WINDS ARE NEAR 80 MPH WITH HIGHER GUSTS. IRENE IS FORECAST TO REMAIN A HURRICANE AS IT MOVES NEAR OR OVER THE MID-ATLANTIC COAST AND APPROACHES NEW ENGLAND. THE HURRICANE IS FORECAST TO WEAKEN AFTER LANDFALL AND BECOME A POST-TROPICAL CYCLONE SUNDAY NIGHT OR EARLY MONDAY.

IRENE IS A LARGE TROPICAL CYCLONE. HURRICANE-FORCE WINDS EXTEND OUTWARD UP TO 85 MILES FROM THE CENTER.

TROPICAL-STORM-FORCE WINDS EXTEND OUTWARD UP TO 290 MILES.

A NATIONAL OCEAN SERVICE OBSERVING SITE AT OREGON INLET NORTH CAROLINA RECENTLY REPORTED A SUSTAINED WIND OF 59 MPH...WITH A GUST TO 81 MPH. A SUSTAINED WIND OF 58 MPH WITH A GUST TO 74 MPH WAS RECENTLY MEASURED AT MANTEO NORTH CAROLINA.

THE LATEST MINIMUM CENTRAL PRESSURE REPORTED BY AN AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT WAS 950 MB...28.05 INCHES.

#### HAZARDS AFFECTING LAND

-----  
WIND...TROPICAL-STORM-FORCE WINDS WILL SPREAD NORTHWARD ALONG THE MID-ATLANTIC COAST THIS EVENING WITH HURRICANE CONDITIONS EXPECTED TONIGHT. TROPICAL STORM CONDITIONS ARE EXPECTED TO REACH SOUTHERN NEW ENGLAND LATE THIS EVENING WITH HURRICANE CONDITIONS EXPECTED BY SUNDAY MORNING. WINDS AFFECTING THE UPPER FLOORS OF HIGH-RISE BUILDINGS WILL BE SIGNIFICANTLY STRONGER THAN THOSE NEAR GROUND-LEVEL.

STORM SURGE...AN EXTREMELY DANGEROUS STORM TIDE WILL RAISE WATER LEVELS BY AS MUCH AS 5 TO 9 FEET ABOVE GROUND LEVEL IN THE HURRICANE WARNING AREA IN NORTH CAROLINA...INCLUDING THE ALBEMARLE AND PAMLICO SOUNDS. STORM SURGE WILL RAISE WATER LEVELS BY AS MUCH AS 4 TO 8 FEET ABOVE GROUND LEVEL WITHIN THE HURRICANE WARNING AREA FROM THE NORTH CAROLINA/VIRGINIA BORDER NORTHWARD TO CAPE COD INCLUDING SOUTHERN PORTIONS OF THE CHESAPEAKE BAY AND ITS TRIBUTARIES. NEAR THE COAST...THE SURGE WILL BE ACCOMPANIED BY LARGE...DESTRUCTIVE...AND LIFE-THREATENING WAVES. HIGHER THAN NORMAL ASTRONOMICAL TIDES ARE OCCURRING THIS WEEKEND. COASTAL AND RIVER FLOODING WILL BE HIGHEST IN AREAS WHERE THE PEAK SURGE OCCURS AROUND THE TIME OF HIGH TIDE. STORM TIDE AND SURGE VALUES ARE VERY LOCATION-SPECIFIC...AND USERS ARE URGED TO CONSULT PRODUCTS ISSUED BY THEIR LOCAL NATIONAL WEATHER SERVICE OFFICES.

RAINFALL...IRENE IS EXPECTED TO PRODUCE RAINFALL ACCUMULATIONS OF 6 TO 12 INCHES...WITH ISOLATED MAXIMUM AMOUNTS OF 20 INCHES...FROM EASTERN NORTH CAROLINA NORTHWARD THROUGH THE MID-ATLANTIC STATES INTO EASTERN NEW YORK AND INTERIOR NEW ENGLAND. THESE RAINS... COMBINED WITH HEAVY RAINS OVER THE PAST FEW WEEKS...COULD CAUSE WIDESPREAD FLOODING...LIFE-THREATENING FLASH FLOODS...AND SIGNIFICANT UPROOTING OF TREES DUE TO RAIN-SOFTENED GROUNDS.

SURF...LARGE SWELLS GENERATED BY IRENE ARE AFFECTING MUCH OF THE EAST COAST OF THE UNITED STATES. THESE SWELLS WILL CAUSE LIFE-THREATENING SURF AND RIP CURRENT CONDITIONS.

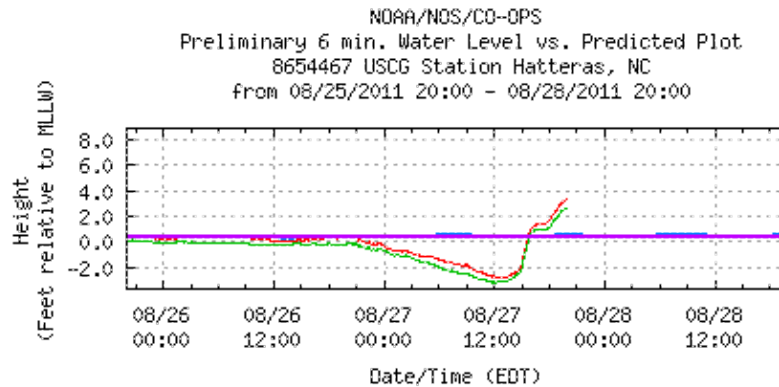
TORNADOES...ISOLATED TORNADOES ARE POSSIBLE ALONG THE COAST OF MARYLAND...DELAWARE...AND NEW JERSEY THROUGH TONIGHT.

FORECASTER BROWN

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: [USCG Station Hatteras - Water Level](#), [USCG Station Hatteras - Winds](#), [Oregon Inlet Marina - Water Level](#), [Oregon Inlet Marina - Winds](#), [Duck - Water Level](#), [Duck - Winds](#), [Duck - Barometric](#), [Duck - Air/Water Temp](#), [Chesapeake Bay Bridge Tunnel - Water Level](#), [Chesapeake Bay Bridge Tunnel - Winds](#), [Yorktown USCG Training Center - Water Level](#), [Yorktown USCG Training Center - Winds](#), [Yorktown USCG Training Center - Barometric](#), [Windmill Point - Water Level](#), [Lewisetta - Water Level](#), [Wachapreague - Water Level](#), [Wachapreague - Winds](#), [Ocean City Inlet - Water Level](#), [Lewes - Water Level](#), [Lewes - Winds](#), [Lewes - Barometric](#), [Cape May - Water Level](#), [Cape May - Winds](#), [Atlantic City - Water Level](#), [Atlantic City - Barometric](#), [Ship John Shoal - Water Level](#),

[USCG Station Hatteras, NC - Return to List](#)



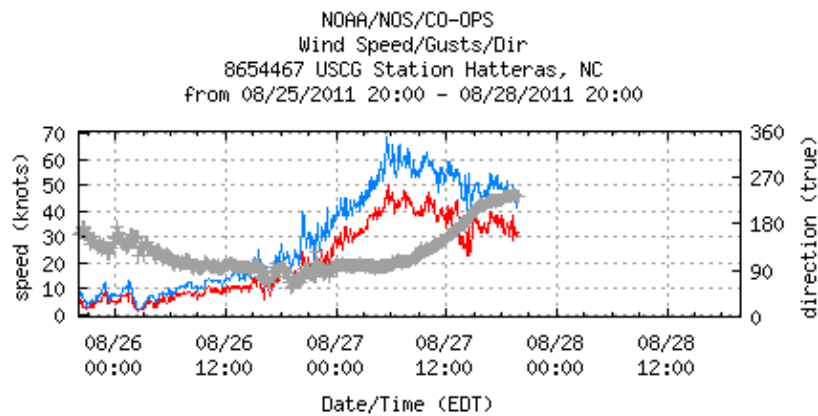
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 3.29 ft.** **Predicted: 0.63 ft.** **Residual: 2.66 ft.**

Historical Maximum Water Level: , 0 ft. above MHHW

[USCG Station Hatteras, NC - Return to List](#)

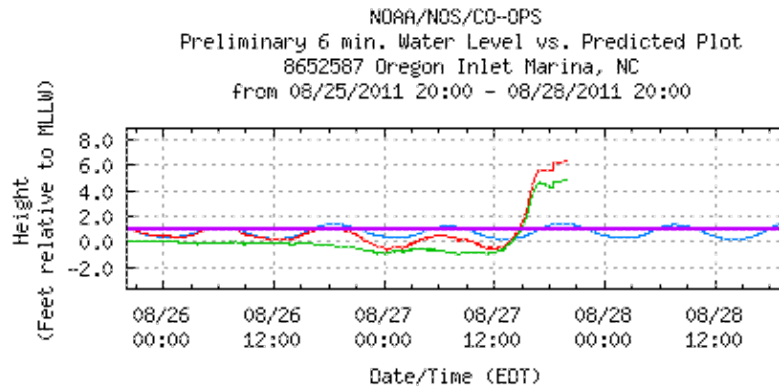


speed — gusts — direction +

Last Observed Sample: 08/27/2011 19:48 (EDT)

**Wind Speed: 32 knots** **Gusts: 46 knots** **Direction: 235° T**

Oregon Inlet Marina, NC - Return to List



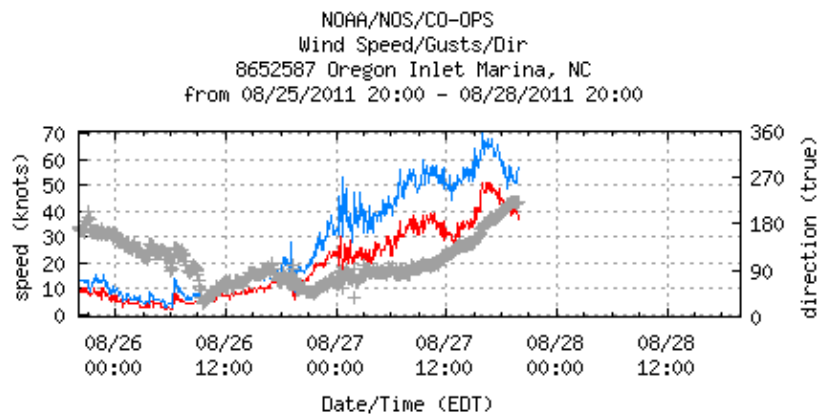
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 6.30 ft.** **Predicted: 1.43 ft.** **Residual: 4.87 ft.**

Historical Maximum Water Level: Sep 16 1999, 4.48 ft. above MHHW

Oregon Inlet Marina, NC - Return to List

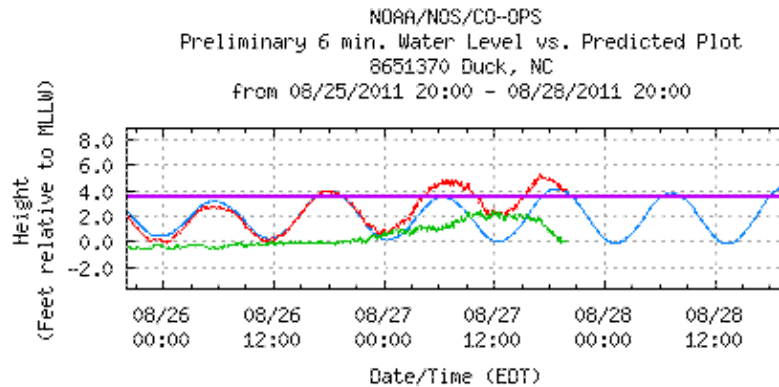


speed — gusts — direction +

Last Observed Sample: 08/27/2011 19:48 (EDT)

**Wind Speed: 37 knots** **Gusts: 57 knots** **Direction: 224° T**

[Duck, NC - Return to List](#)



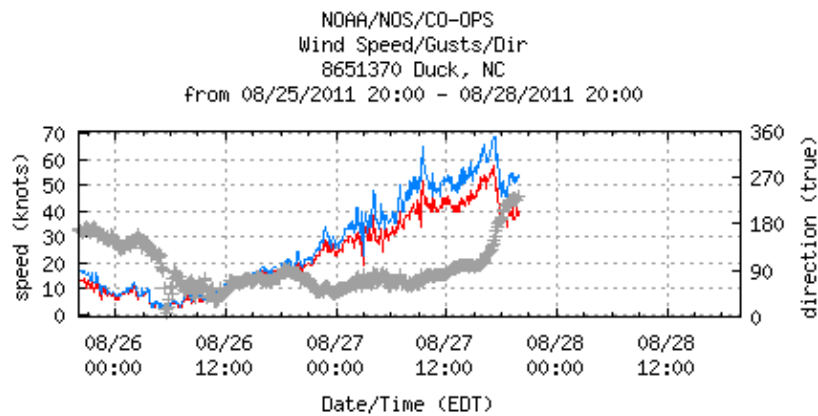
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 4.03 ft.** **Predicted: 3.90 ft.** **Residual: 0.13 ft.**

Historical Maximum Water Level: Aug 30 1999, 3.23 ft. above MHHW

[Duck, NC - Return to List](#)



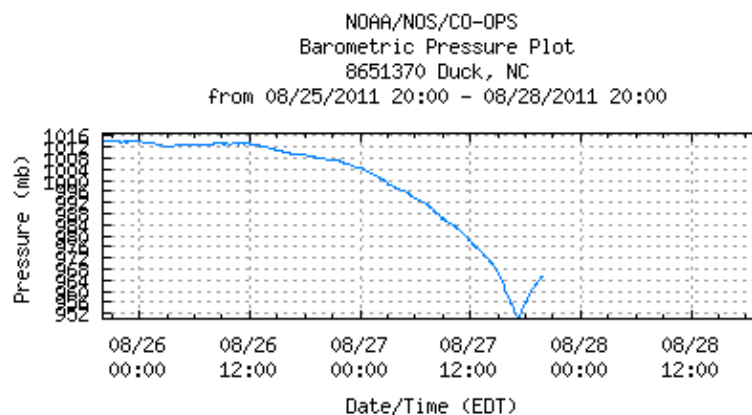
speed — gusts — direction +

Last Observed Sample: 08/27/2011 19:48 (EDT)

**Wind Speed: 38 knots** **Gusts: 54 knots** **Direction: 232° T**



[Duck, NC - Return to List](#)

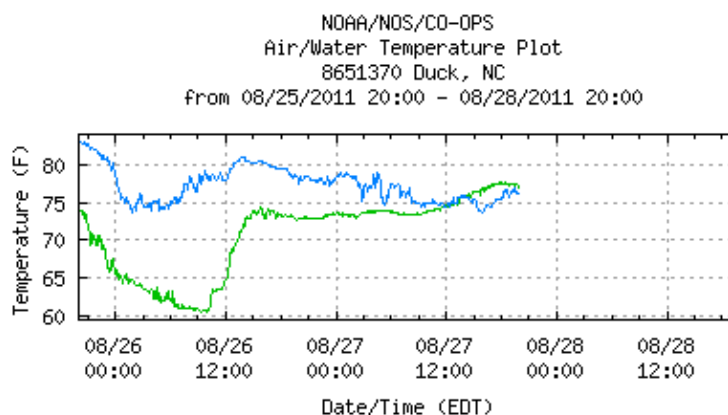


barometric pressure —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Barometric Pressure: 965.6 mb

[Duck, NC - Return to List](#)

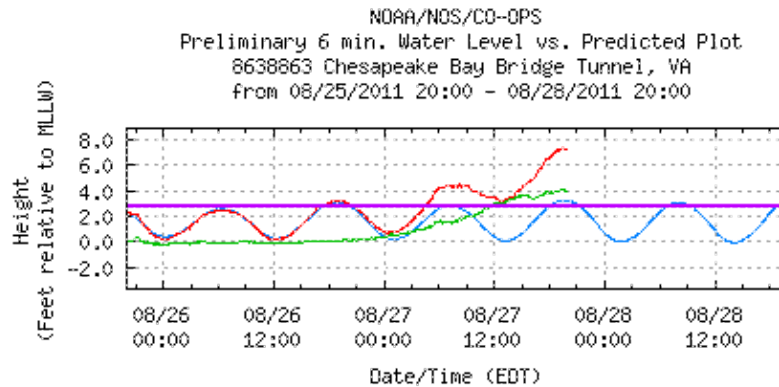


water temp. — air temp —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Water Temperature: 77.0° F Air Temperature: 76.1° F

Chesapeake Bay Bridge Tunnel, VA - Return to List



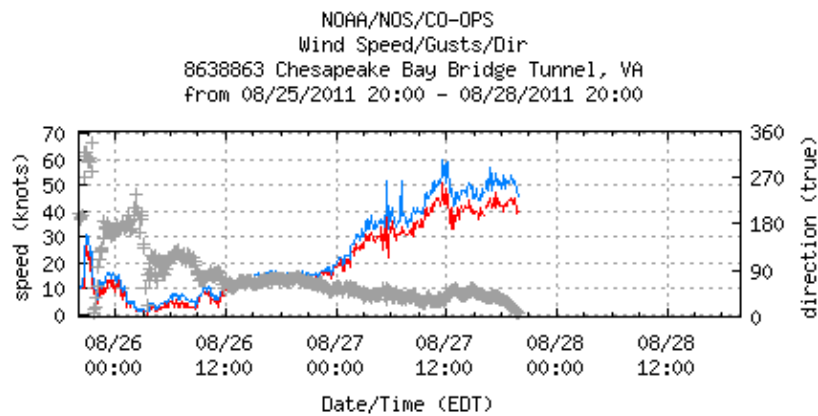
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 7.24 ft.** **Predicted: 3.24 ft.** **Residual: 4.00 ft.**

Historical Maximum Water Level: Feb 5 1998, 3.68 ft. above MHHW

Chesapeake Bay Bridge Tunnel, VA - Return to List

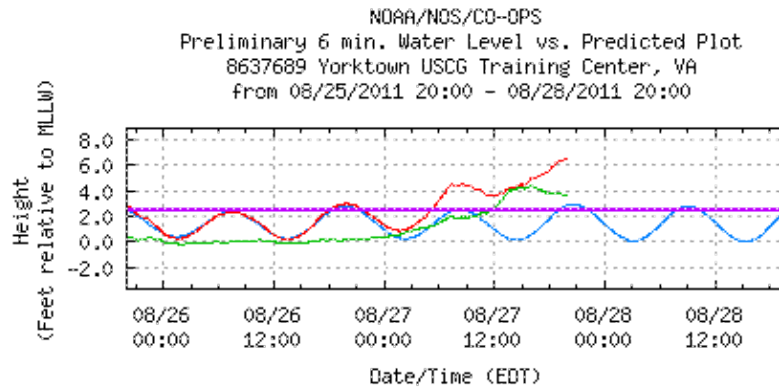


speed — gusts — direction +

Last Observed Sample: 08/27/2011 19:48 (EDT)

**Wind Speed: 40 knots** **Gusts: 46 knots** **Direction: 8° T**

Yorktown USCG Training Center, VA - Return to List



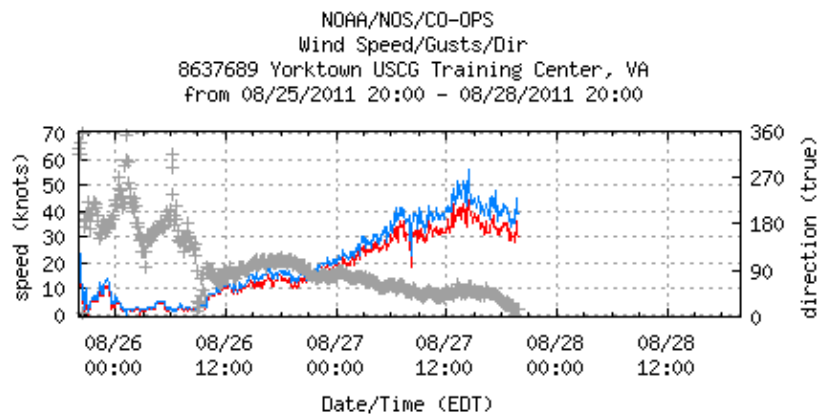
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 6.47 ft.** **Predicted: 2.82 ft.** **Residual: 3.65 ft.**

Historical Maximum Water Level: Nov 12 2009, 4.27 ft. above MHHW

Yorktown USCG Training Center, VA - Return to List

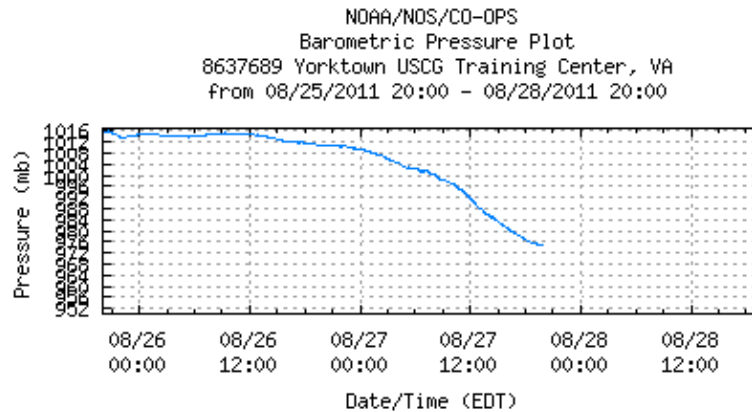


speed — gusts — direction +

Last Observed Sample: 08/27/2011 19:48 (EDT)

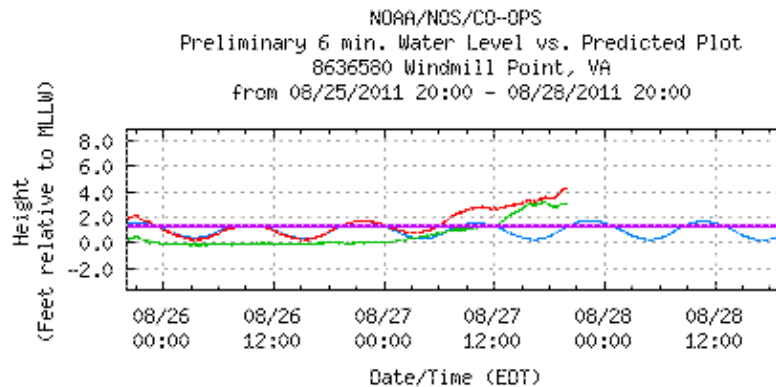
**Wind Speed: 30 knots** **Gusts: 39 knots** **Direction: 13° T**

Yorktown USCG Training Center, VA - Return to List



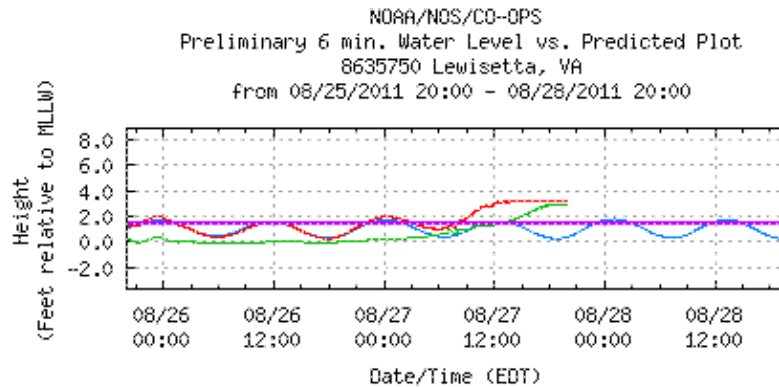
barometric pressure —  
Last Observed Sample: 08/27/2011 19:48 (EDT)  
Barometric Pressure: 975.0 mb

Windmill Point, VA - Return to List



Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —  
Last Observed Sample: 08/27/2011 19:48 (EDT)  
Relative to MLLW: Observed: 4.31 ft. Predicted: 1.22 ft. Residual: 3.09 ft.  
Historical Maximum Water Level: Sep 1 2006, 3.74 ft. above MHHW

Lewisetta, VA - Return to List



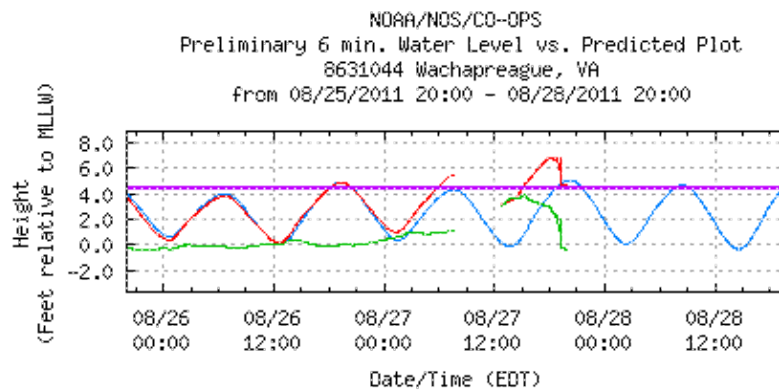
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 3.20 ft.** **Predicted: 0.35 ft.** **Residual: 2.85 ft.**

Historical Maximum Water Level: Feb 5 1998, 2.33 ft. above MHHW

Wachapreague, VA - Return to List



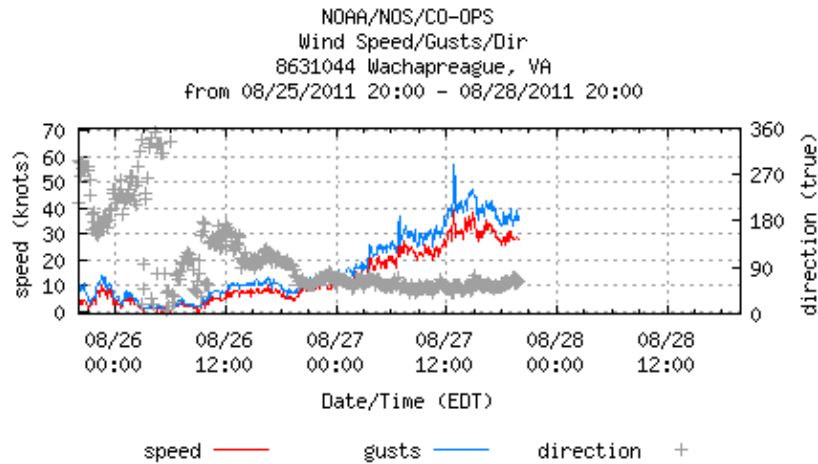
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 4.69 ft.** **Predicted: 5.01 ft.** **Residual: -0.32 ft.**

Historical Maximum Water Level: Feb 5 1998, 4.41 ft. above MHHW

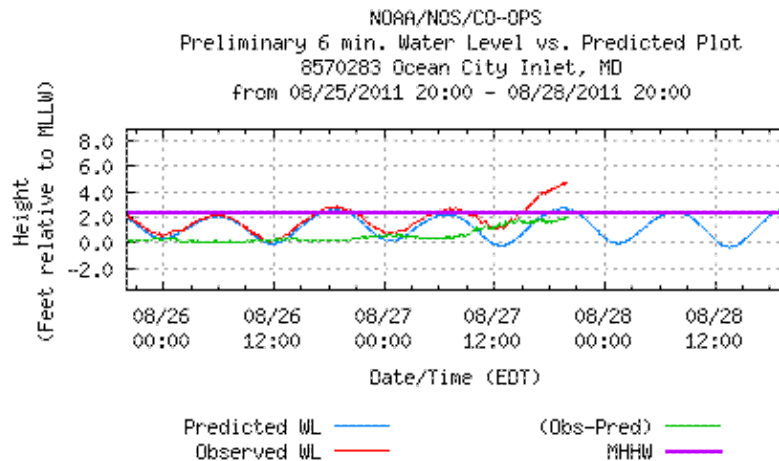
Wachapreague, VA - Return to List



Last Observed Sample: 08/27/2011 19:48 (EDT)

Wind Speed: 28 knots Gusts: 35 knots Direction: 63° T

Ocean City Inlet, MD - Return to List

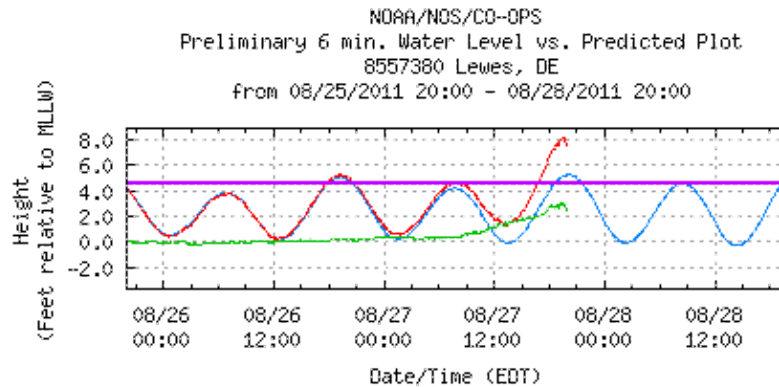


Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: Observed: 4.69 ft. Predicted: 2.67 ft. Residual: 2.02 ft.

Historical Maximum Water Level: Feb 5 1998, 3.61 ft. above MHHW

[Lewes, DE - Return to List](#)



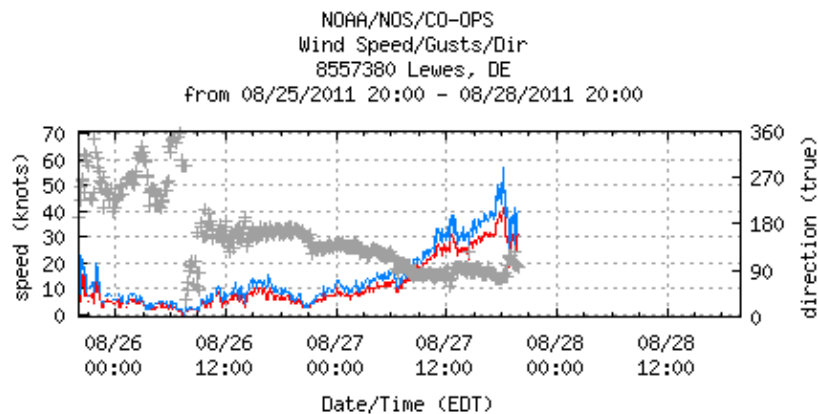
Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 7.59 ft.** **Predicted: 5.20 ft.** **Residual: 2.39 ft.**

Historical Maximum Water Level: Mar 6 1962, 4.57 ft. above MHHW

[Lewes, DE - Return to List](#)

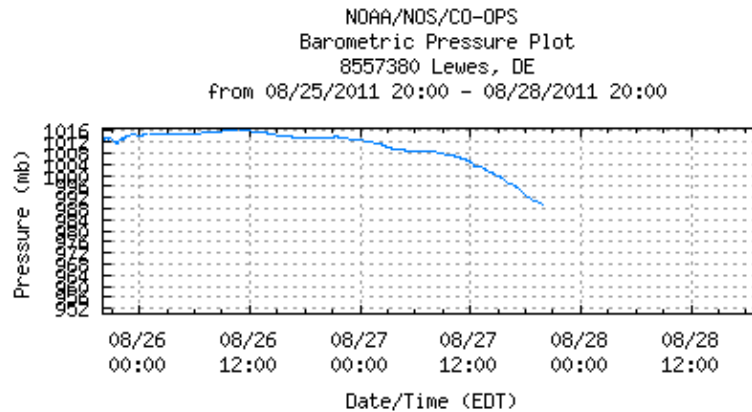


speed — gusts — direction +

Last Observed Sample: 08/27/2011 19:48 (EDT)

**Wind Speed: 31 knots** **Gusts: 40 knots** Direction: 96° T

Lewes, DE - Return to List

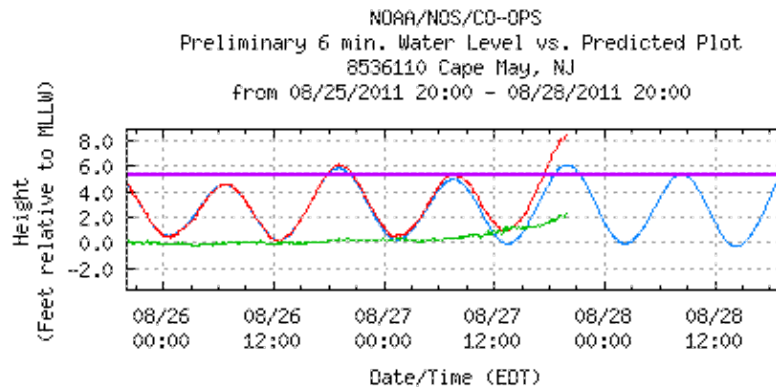


barometric pressure —

Last Observed Sample: 08/27/2011 19:48 (EDT)

Barometric Pressure: 989.5 mb

Cape May, NJ - Return to List



Predicted WL — (Obs-Pred) —  
Observed WL — MHHW —

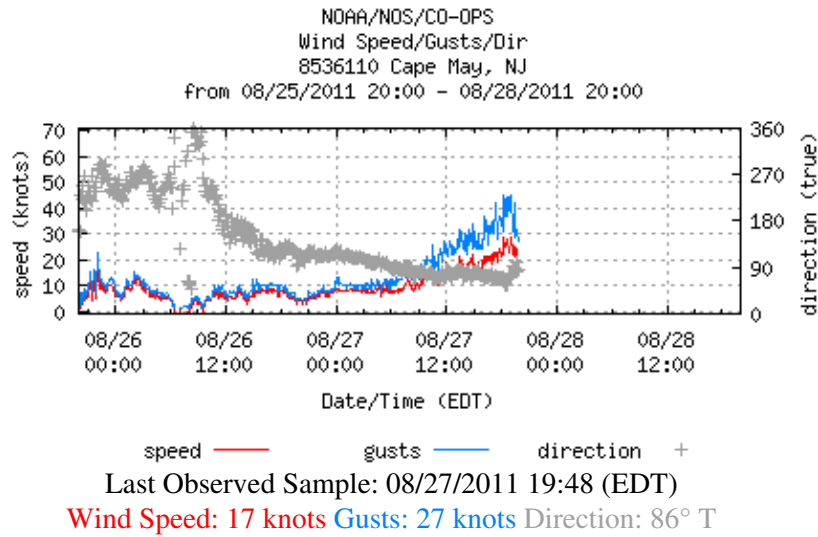
Last Observed Sample: 08/27/2011 19:48 (EDT)

Relative to MLLW: **Observed: 8.36 ft.** **Predicted: 6.07 ft.** **Residual: 2.29 ft.**

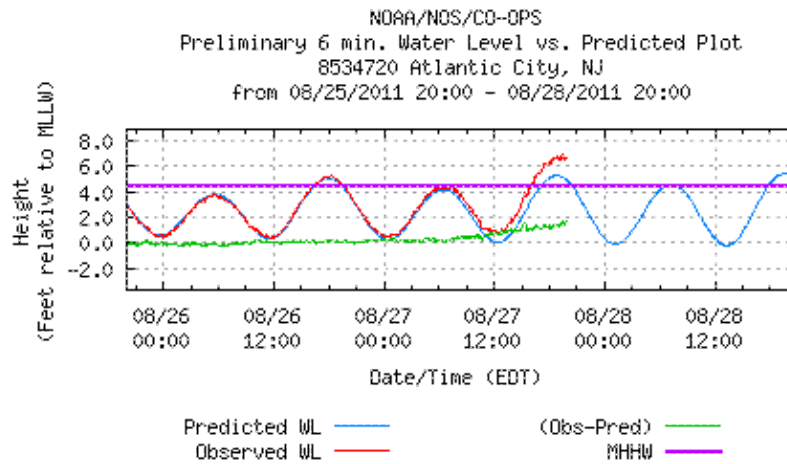
Historical Maximum Water Level: Sep 27 1985, 3.36 ft. above MHHW



Cape May, NJ - Return to List

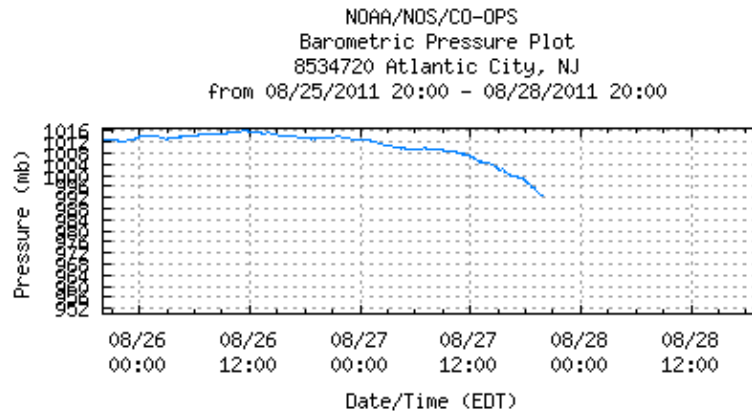


Atlantic City, NJ - Return to List



Last Observed Sample: 08/27/2011 19:48 (EDT)  
Relative to MLLW: Observed: 6.57 ft. Predicted: 4.94 ft. Residual: 1.63 ft.  
Historical Maximum Water Level: Dec 11 1992, 4.38 ft. above MHHW

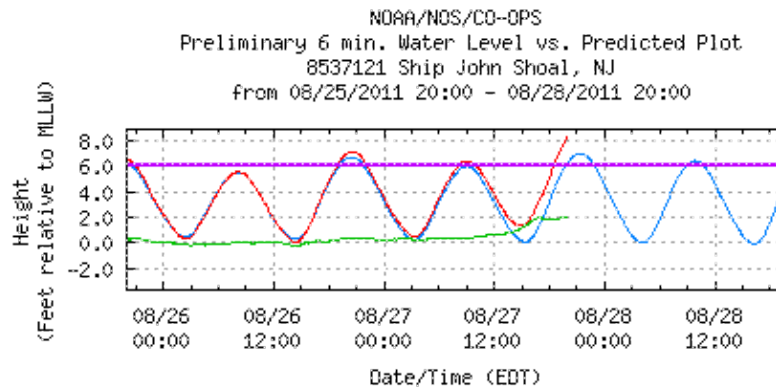
Atlantic City, NJ - Return to List



Last Observed Sample: 08/27/2011 19:48 (EDT)

Barometric Pressure: 992.8 mb

Ship John Shoal, NJ - Return to List



Last Observed Sample: 08/27/2011 19:54 (EDT)

Relative to MLLW: **Observed: 8.20 ft.** **Predicted: 6.17 ft.** **Residual: 2.03 ft.**

Historical Maximum Water Level: Apr 17 2011, 3.08 ft. above MHHW

Hurricane IRENE QuickLook, POSTED 18:00 EDT 08/27/2011

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS)  
National Oceanic and Atmospheric Administration | U.S. Department of Commerce